



United States
Department Of
Agriculture

Forest
Service

Shasta-Trinity
National Forests

La# 41.61950 Lon -121.77023

Reply To: 3420

Date: June 15, 1992

Subject: Evaluation of White Fir Mortality in the Tamarack
Thin Timber Sale Area, Goosenest Ranger District
(FPM Report N92-5)

To: Forest Supervisor, Klamath National Forest

At the request of Kari Warren, Forest Pest Management staff members Gregg DeNitto, Dave Schultz, and Linda Haugen met with Goosenest Ranger District personnel Kari Warren, John Perkins, Tom Hamilton, and Bill Reynolds at the proposed Tamarack Thin Timber Sale area (T. 44 N., R. 2 E., sections 29 and 32) on May 7th, 1992. The purpose of the visit was to evaluate the cause and severity of, and potential for loss from, mortality due to pathogens and insects of white fir in the proposed sale area.

The area consists primarily of white fir (approx 70%) and ponderosa pine. The area is scheduled for a commercial thinning sale in 1994-95. Much of the white fir contains moderate to high levels of dwarf mistletoe (Arceuthobium abietinum f.sp. concoloris). Under prolonged drought conditions, the stand has suffered higher levels of mortality over the past three years. Current mortality is concentrated in trees stressed by heavy mistletoe infection. Fir engraver beetle (Scolytus ventralis) is involved in the mortality. Many of the trees are also affected by dead and dying branches from infection by Cytospora abietis, a canker fungus commonly associated with dwarf mistletoe under stress conditions.

The District is concerned that high mortality will continue. This may affect the viability of the future sale and result in unrecovered timber volume. Most of the trees that have recently died or are dying are in the smaller size classes and will not be merchantable by the time the proposed timber sale contract is offered. They are considering a salvage sale prior to the proposed thinning to try to recoup some of the volume. Any salvage this year would be aimed at removing dead trees and would not include sanitation efforts. Two concerns expressed by District personnel were possible soil compaction and increased fuel loads. Soil conditions may require that harvesting take place during the dry season. The higher levels of tree mortality will result in higher fuel loads and increased threat of resource loss from fire.

The reasons for the higher level of mortality are several-fold, including drought, heavy dwarf mistletoe and Cytospora, and high stocking levels. Salvage activities this year will not influence these factors and will not reduce future mortality. Not salvaging this year obviously results in lost volume and increased fuel loads. Present conditions indicate that white fir mortality will continue in this area into 1993. The drought has not abated, if anything it may be worse, and this will result in continued susceptibility of white fir to fir engraver attacks. Most of the trees attacked this summer will not fade until





mistletoe suppression activities will increase these costs. Practices which can be funded include dwarf mistletoe surveys to gather mistletoe distribution and severity data, removal of infected residual trees when not a part of normal reforestation or sale cleanup, sanitation solely for dwarf mistletoe suppression, stand destruction when it cannot be economically harvested, and pruning or removal of infected trees or tree parts. This last practice is specified for recreation areas and agreement from the Regional Office will be necessary if the District desires to treat the old-growth pines discussed above. Proposals must be supported by a biological evaluation by FPM (this document), a FPM Project Proposal (FS-3400-2), and be supported by proper NEPA analysis, including an economic analysis sufficient to reflect the benefits and costs of all feasible alternate treatments. Treatments and proposals for funding should be identified in the program development and budgeting process. Suppression needs should be identified to State and Private Forestry as soon as possible. Current fiscal year needs should be identified by January 1 for timely submission to the WO, although funding requests for emergencies or when new opportunities occur can be made at any time. Earlier submission as part of the budget process aids in FPM planning and budgeting.

If there are any questions about this evaluation or if additional assistance is required, please contact me at (916)-246-5101.

GREGG DeNITTO
Plant Pathologist
FPM Northern CA Service Area

